

REMARKS

Claim Rejections - 35 USC §112

The examiner rejected claims 1-9, 11-20, 22-30 and 32-42 under 35 USC §112 first paragraph as failing to comply with the enablement requirement. That is, the examiner asserts the claims contain subject matter which is not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding independent claims 1, 22, and 34, the examiner asserts the claim limitations are unclear as to how a reservation facility can reserve resources for reading data from and writing data to a disk to support a Quality-of-Service constraint with respect to data transmitted through a computer network. The examiner asserts the same argument with respect to independent claims 11 and 33 in that it is unclear how a reservation facility can reserve resources within a disk drive to support a Quality-of-Service constraint with respect to data transmitted through a computer network. In particular, the examiner asserts "there seems to be something missing from the claims that would enable a link between the QoS and reserving of a resource in a disk drive." The applicant respectfully disagrees.

The independent claims recite that the reservation facility reserves a resource associated with accessing a disk (or a disk drive) by limiting movement of the head so as to constrain the head to a predetermined region of the disk. The embodiment wherein the reservation facility is implemented within a disk drive (FIG. 7) is described at page 11, lines 25+:

"In another embodiment, the reservation facility within the disk controller 80 limits movement of the head 78 so as to constrain the head 78 to a predetermined region 88 of the disk 76, thereby reserving a

resource within the disk drive 54_i. In one embodiment, the predetermined region 88 is defined by a predetermined number of concentric tracks recorded on the disk 76 and centered about a predetermined radial location. For example, if a client's data stream is to be written to a particular track, then the reservation facility may limit movement of the head 78 so as to prevent the head 78 from deviating excessively from the data stream's track. This limits the seek time to the data stream's track in order to satisfy the QOS constraints. In other words, if the disk drive 54_i is servicing another request, the seek time to return the head 78 to the data stream's track will always be within a known threshold which ensures that the QOS constraints are satisfied with respect to the client's request to write the data stream to the disk 76."

Therefore, the claims recite a technique for reserving resources to support a QoS constraint by limiting movement of the head so as to constrain the head to a predetermined region of the disk, and the claim limitations are clearly supported by the specification.

The examiner also asserts the applicant has failed to disclose "a communication that happens between the network resources and the disk drive to enable the disk drive to reserve resources." The applicant respectfully disagrees. The specification and drawings disclose the elements of a network, such as a switched node network shown in FIG. 3 or a network comprising a plurality of disk drives as shown in FIG. 5. An embodiment for each switched node is disclosed in FIG. 2 which is described at page 5, line 5, through page 9, line 9, including extensive information on how the switched node operates, particularly with respect to reserving resources associated with accessing a disk to support a QoS constraint. The embodiment of FIG. 5 is described at page 9, line 10, through page 13, line 17, including extensive information on how each disk drive reserves resources to support a QoS constraint. The examiner's argument is misplaced

given the extensive information disclosed in applicant's specification. The rejection should be withdrawn.

The examiner rejected claims 1-9, 11-20, 22-30 and 32-42 under 35 USC §112 second paragraph as being indefinite. In particular, the examiner asserts it is unclear whether the "reservation facility" recited in the claims reads on elements 18A-18E in the switched node embodiment of FIG. 2, or the disk controller 80 of the disk drive shown in FIG. 7. The applicant asserts that the "reservation facility" reads on both embodiments shown in FIG. 2 and FIG. 7, as well as other embodiments not disclosed by the applicant but contemplated by those skilled in the art. It is not necessary for the claim limitations to read on a single embodiment disclosed in the specification in order to comply with the provisions of 35 USC §112, second paragraph. The mere fact the applicant has disclosed multiple embodiments of a reservation facility in the specification does not render the claim indefinite. The rejection should be withdrawn.

CONCLUSION

In view of the above remarks, the rejections under 35 USC §112 should be withdrawn. The examiner is encouraged to contact the undersigned over the telephone in order to resolve any remaining issues that may prevent the immediate allowance of the present application.

Respectfully submitted,

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CERTIFICATE OF MAILING

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